

## FACILITY PERSONNEL

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### Facility Manager

**Aria Soha**

Office 630.840.4463

Cell: 815.970.4652

aria@fnal.gov

### Deputy Facility Manager

**Doug Jensen**

Office 630.840.8194

djensen@fnal.gov

### FTBF Mechanical Support Chief

**Todd Nebel**

Office 630.840.3837

Cell: 630.740.1981

tnebel@fnal.gov

### FTBF Mechanical Support Staff

**Jerry Taccki**

Office: 630.840.4737

taccki@fnal.gov

### MTest Beamline Expert

**Rick Coleman**

Office: 630.840.3030

coleman@fnal.gov

### Detector R&D Head

**Erik Ramberg**

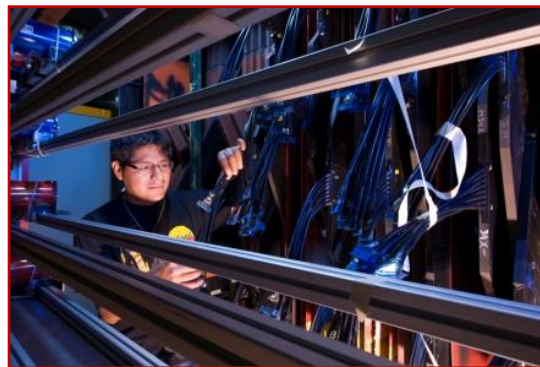
ramberg@fnal.gov



## **Fermilab** **Test Beam Facility**



<http://www-ppd.fnal.gov/FTBF>



## **Fermilab** **TEST BEAM FACILITY**

Information for Experimenters

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# ABOUT FTBF

The Fermilab Test Beam Facility (FTBF) is devoted to detector research and development. The facility consists of two versatile beam lines (MTest and MCenter) in which users can test equipment or detectors.

The facility is located at the Fermi National Accelerator Laboratory in Batavia, IL, on the west side of the Meson Detector Building.

## ABOUT THE BEAM

Typically, beam is delivered in one 4 second spill per minute, although 1 second spills, or even millisecond length spills can be supported.

The primary beam consists of high energy protons (120 GeV) at moderate intensities ( $\sim 1\text{-}300\text{ kHz}$ ). This beam can also be targeted to create secondary, or even tertiary particle beams of energies down to below 1 GeV, consisting of pions, muons, and/or electrons. Intensities up to 100 kHz can be reached.

Generally beam is run to the facility for 12 hours a day between the hours of 0400 and 1800.

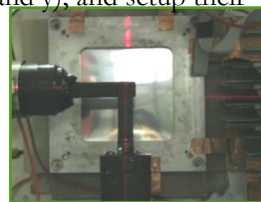


## ABOUT THE FACILITY

Within the beamline enclosures, and available to all approved users, the facility provides motion tables at different locations which can be viewed and controlled remotely from the control rooms while beam is running.



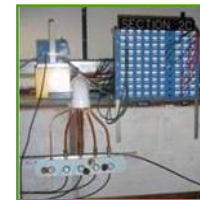
Section 2 of the MT6 enclosures (the most commonly used area) has a system of lasers installed such that users can determine the exact location of the beam (in x and y), and setup their apparatus accordingly.



The facility also provides multiple types of beam detector instrumentation, for tracking, particle identification, and triggering. These include scintillators, finger counters, Cerenkov counters, lead glass calorimeters, pixel telescopes, a time-of-flight system and several types of wire chambers. These systems can work alone and come with their own

DAQ system, or they can be integrated into the user's setup.

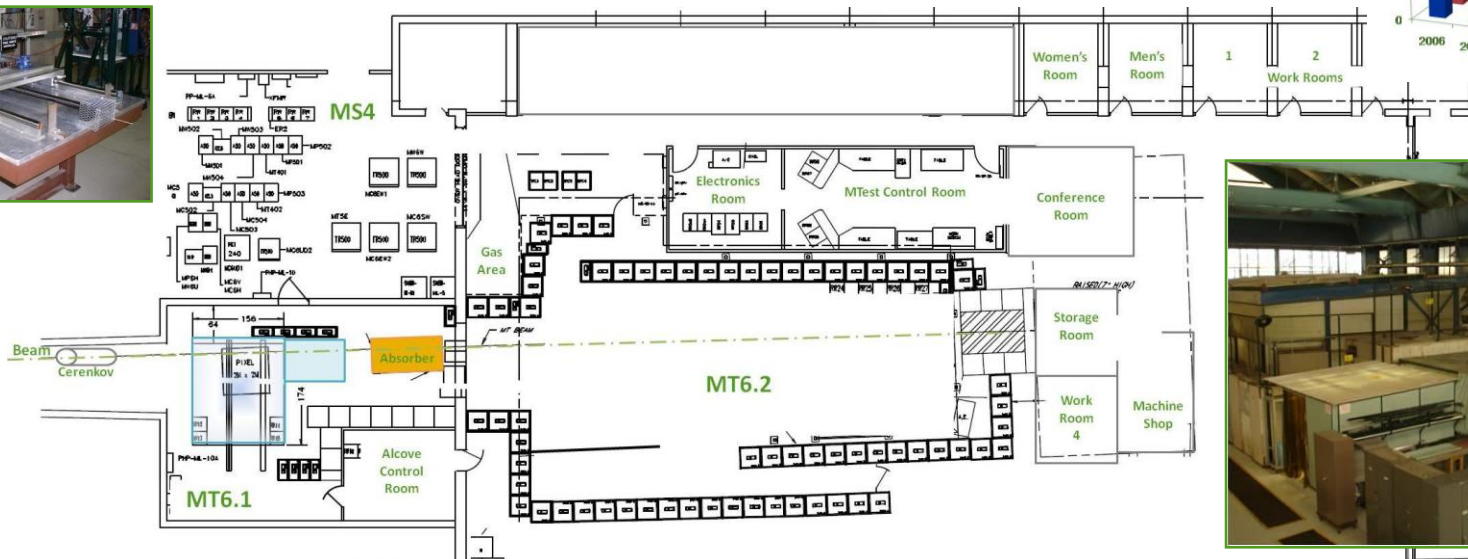
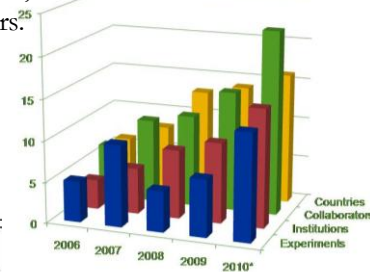
The MTest beamline is outfitted with a gas distribution system, which delivers gas to 6 locations, 2 of which have flammable gas capabilities. Some gases, like Nitrogen, are provided by the facility.



Both beamlines are also outfitted with signal and High Voltage cable patch panels, located at pre-determined positions throughout the enclosures to be near equipment setup areas. These patch panels are linked to the various control rooms.

## PERFORMANCE

Over the past few years the Test Beam Facility has performed 26 experiments, with 331 collaborators, from 102 institutions, in 21 countries! Below is a chart of the past five years.



For more information on the Fermilab Test Beam Facility see our website at: <http://www-ppd.fnal.gov/FTBF>